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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,444	02/07/2006	Hideaki Kaji	80374(47762)	5048
21874 7590 01/25/2010 EDWARDS ANGELL PALMER & DODGE LLP P.O. BOX 55874 BOSTON, MA 02205				
EXAMINER				
HARLAN, ROBERT D				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
01/25/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/567,444

**Applicant(s)**

KAJI ET AL.

**Examiner**

Robert D. Harlan

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7,9 and 14-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9 and 14-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

1. The Amendment and Petition for Time Extension filed by Applicant on 09/29/2009 have been entered.
2. Claims 10-13 have been canceled.
3. New claims 22-25 have been added.

***Response to Amendment/Arguments***

4. Applicant's amendment and arguments filed on 09/29/2009 have been fully considered and they are found persuasive.
5. The rejection of claims 1-5, 7-17 and 20-21 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is withdrawn.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 recites a range with a range with respect to humectant. Whenever a range within a range is recited the claims are indefinite for not putting forth a definite scope.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-5, 7 and 14-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Waki et al., U.S. Patent No. 7,008,994 (hereinafter "Waki") in view of Hendi et al., EP 0 790 281 B1 (hereinafter "Hendi"). Waki teaches an aqueous pigment dispersion, process for producing the same, and water-based ink. See Waki, Abstract; col. 2, line 58 through col. 3, line 21. Waki teaches a process comprising kneading a mixture containing

a styrene-(meth)acrylic acid resin, a pigment, a high-boiling solvent followed by dispersing the mixture in an aqueous medium. See Waki, col. 3, lines 58-67; Example 1-2. The resin has an acid value of 30-300 and Mn 2,000-20,000. See Waki, col. 4, line 21. Waki teaches the use of several pigments described in the claimed invention. See Waki, col. 4, lines 37-67. In example 1, the resin is a styrene-acrylic acid copolymer with a styrene-acrylic acid weight ratio of 88/12 wherein the copolymer is expected to have a  $T_g$  higher than 90°C since the  $T_g$ 's of styrene homopolymer and acrylic acid homopolymer are both much greater than 90°C. Waki further teaches solvent comprising humectants. See Waki, col. 7, lines 16-29. The resin is neutralized with an organic amine during or after the kneading step. See Waki, col. 5, lines 53-67. Waki further teaches the use of planetary mixers for kneading. See col. 5, lines 42-47. The pigment dispersion is used in numerous formulations including coating and inks wherein the coatings and inks include ink-jet ink. See Waki, col. 10, lines 34-67; col. 11, lines 1-17. Thus, Waki anticipates claims 1-5, 7 and 14-25.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waki et al., U.S. Patent No. 7,008,994 (hereinafter "Waki"). Regarding the claimed alkali metal hydroxide, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to

have modified the method taught by Waki by replacing the organic amine with another base such as alkali metal hydroxide for neutralizing the carboxylic acid groups of the resin since organic amine and alkali metal hydroxide are functionally equivalent and can be used interchangeably for the purpose of neutralizing carboxylic acid groups. Such replacement would not be expected to result in any critical impact to the dispersion.

13. Waki teaches water based ink jet ink comprising the disclosed pigment dispersion as discussed above. Waki fails to teach a thermal jet type printer. However, since the prior art teaches an aqueous ink for general inkjet printing and it does not teach against thermal inkjet printing, it would have been obvious to a person having ordinary skill in the art the time the invention was made to have employed a thermal ink jet printer for printing the ink taught Waki as this type of ink jet printer is popular and readily available.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert D. Harlan whose telephone number is (571) 272-1102. The examiner can normally be reached on Mon-Thu, 10 AM - 8 PM.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 273-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert D. Harlan/  
Primary Examiner  
Art Unit 1796

rdh